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(54) PRODUCTION OF PHOTOSENSITIVE ELECTROCONDUCTIVE PASTE AND ELECTRODE USING THE SAME

(57) Abstract:

PROBLEM TO BE SOLVED: To obtain an electroconductive paste formable into a thin film on a glass substrate, etc., for formation of fine electrode patterns with a low electrical resistance and high bond strength, by including electroconductive powder, a photosensitive organic component and glass frit specifying each of its glass transition point, glass softening point, particle size and thermal expansion coefficient.

SOLUTION: This paste comprises: electroconductive

power preferably containing at least one kind selected from Ag, Au, Pd, Ni and Pt; a photosensitive organic component preferably containing a photosensitive polymer or photosensitive oligomer, photosensitive monomer and photopolymerization initiator; and a glass frit having a glass transition point of 400 to 500°C, glass softening point of 450 to 550°C, mean particle size of 0.5 to 1.4  $\mu$ m, the 90% particle size of 1 to 3  $\mu$ m and the top particle size of  $\leq$ 4.5  $\mu$ m, and further a thermal expansion coefficient of  $(75$  to  $90)$  $\times$  $10^{-7}$ /K at 50 to 400°C, and preferably containing 20 to 80 wt.%  $Bi_2O_3$  in terms of oxide.

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